

One is by a node level value identifying the node's level in the hierarchy, and a node-in level value identifying the node's location uniquely among nodes in that level.

The other is by a depth value comprising a node level value and an offset from that node level value, and a position-in-level value comprising a node-in-level value and an offset from the node-in-level value.

The applicant has amended claim 1 to clarify the wording. In the claim, a node is identified in two ways: (a) in terms of levels of a hierarchy and (b) in terms of its position in a two-or-more dimensional space. Thus, a node is uniquely identifiable in the hierarchy by a node level value (for example, the node may be in level 3 of the hierarchy) and by a node-in-level value (for example, the node may be node 4 in level 3). As a separate matter, a node has a position in a space that is identified by a depth value and a position-in-level value. The depth value includes the node level value and an offset (for example, in that space, the node could have a depth value of 3.4769528, which is the equivalent to a level of 3 and a floating point offset of 0.4769528). The position-in-level value includes a node-in-level value and an offset (for example, the node could have a position-in-level of 4.2233141 which is equivalent to a node-in-level of 4 and a floating point offset of 0.2233141). The use of such values and offsets facilitates an animated, gradually changing view of the hierarchy.

Regarding claim 8, it is confusing that within a band, the area is divided so that the subarea allocated to a parent node has the same extent along the band as the sum of the extents of the subareas in the adjacent band that are allocated to the children of the parent node. Please explain.

Claim 8 has been amended.

Claim 17 is amended by adding "and releasing." As defined by the claims, the first type of action is dragging, and the second type of action comprises clicking and releasing. It is not reasonable since users can not drag an object without clicking on the object first. That feature is stated in the specification (page 28, lines 28-29).

Therefore, a user can not navigate in the displayed representation of the portion of the hierarchy by the first type of user-interface action, which is dragging, and allowing the selection of any currently represented node by a second type of user-interface action, which are clicking and releasing as claimed.

Applicant believes that the amendment of claim 15 resolves this concern.

16. Claims 1-8, 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Theisen et al. (US Pat No. 5,877,775, 3/2/99, filed 8/6/97).

Regarding independent claim 1, Theisen discloses:

identifying a position in a space associated with a hierarchy of nodes, the hierarchy comprising levels and locations within the levels, the space having at least two dimensions, each node being uniquely identifiable within the space (figure 3; col 4, lines 47-60)

each node being uniquely identifiable by a node level value identifying the node's level in the hierarchy and a node-in-level value identifying the node's location uniquely among nodes in that level (col 4, lines 47-62)

the position in the space being identified by a depth value comprising a node level value and an offset from that node level value (col 4, lines 47-58)

Theisen does not disclose a position-in-level value comprising a node-in-level value and an offset from the node-in-level value. However, since Theisen discloses that the X and Y displacement values determine the distance, and relative offset, between adjacent levels of nodes (col 4, lines 56-58), and the X, Y, Z coordinates, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have included the position-in-level value comprising a node-in-level value and an offset from the node-in-level value. The node-in-level value and an offset from the node-in-level value are merely values in the Z axis for nodes in a same level.

Regarding claims 1-5, applicants argue that Theisen does not disclose or suggest identifying a position by a "depth value comprising a node level value and an offset" and by a "node-in-level value comprising a node-in-level value and an offset" (Remark, page 12).

Examiner disagrees. Theisen discloses using X, Y, Z coordinates to identify positions wherein the X and Y displacement values determine the distance, and relative offset, between adjacent levels of nodes to be displayed (col 4, lines 49-60). Also, it would have been obvious that the X, Y, Z coordinates includes integral and non-integral numbers of positions wherein a non-integral number representing an offset of either a level value or a node-in-level value.

The examiner gives no reason, other than her simple assertion, why it would have been obvious to have expressed a position-in-level value as a node-in-level value and an offset from the node-in-level value. The examiner has not shown that there was any suggestion in Theisen to do so. The fact that Theisen discusses three coordinates (X, Y, and Z) is not itself a suggestion that what was done for coordinates X and Y might also be done for coordinate Z. To the contrary, the use of the X and Y distance and offset values in Theisen were for the purpose of expressing the node positions with reference to a third axis, Z. But there would be no purpose or suggestion for extending that approach to position along the Z axis and no indication of how it would be done. Applicant therefore disagrees with the examiner's conclusion that "it would have been obvious that the ... Z coordinates includes integral and non-integral numbers of positions wherein a non-integral number representing an offset of ... a node-in-level value."

Regarding independent 6 and claim 7, Theisen discloses:

dividing area on the display into subareas (figure 3, objects are displayed in different level areas)

allocating nodes of a hierarchy of nodes respectively to each of the subareas (figure 3, each subarea of each level includes nodes of the hierarchy at various positions)

displaying, in the area, a node representation for each allocated node, the node representation occupying the entire subarea to which the node is allocated (figure 11A)

the nodes in the hierarchy are organized in levels and at least some of the nodes of one level are fully represented in a direction of the display that corresponds to different levels and at least some of the nodes of levels of the hierarchy above and below the one level that are at least partially represented (figure 3) Theisen does not disclose "receiving an indication of an action to be taken, the indication being received made at any arbitrary position within the subarea".

However, as disclosed in the specification of the invention, the user triggers the action associated with a displayed node of the hierarchy by invoking the node using the second type of action (page 4, lines 28-31). In Theisen figure 9, item 194 and 196, when user clicks on a container, tree highlighting action is taken on the tree below the container, the action is made at any arbitrary position within the subarea. item 224 shows that when user clicks on a container, the animation starts. action is taken on a displayed node, which is equivalent to a stick or a container in Theisen, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified Theisen to include receiving and indication of an action at any arbitrary position within the subarea since the stick or container position can be an arbitrary position.

Regarding claims 6-7, applicants argue that Theisen does not disclose "receiving an indication of an action to be taken, the indication being received made at any arbitrary position within the subarea" as amended. Also, the spaces between the sticks cannot receive any indication of an action to be taken because Theisen only receives indications at sticks and container and not at the space between them.

Examiner disagrees. Theisen does teach receiving indications at sticks and container, which can be one of arbitrary positions. As disclosed in the specification, the user triggers the action associated with a displayed node of the hierarchy by invoking the node using the second type of action (page 4, lines 28-31). Since the action is taken on a displayed node, which is equivalent to a stick or a container in Theisen. Theisen does teach that subject matter.

Applicant has amended claim 6 to clarify the wording. As the applicant stated in the interview, in Theisen an indication of an action to be taken cannot be received at any arbitrary position with the area of the display at a given time. And Theisen gives no hint of such an arrangement. Applicant believes that the examiner and her supervisor found the applicant's argument persuasive and that the claim is patentable.

Regarding independent claim 15 and dependent claims 16 and 17, Theisen discloses: displaying a representation of a portion of a hierarchy of nodes to a user (figures 7AB) enabling a user to navigate in the displayed representation of the portion of the hierarchy by a type of user-interface action, which is clicking, and allowing, by a type of user-interface action the selection of any currently represented node, which is dragging (figure 15, user clicks and drags on container label; col 8, lines 22-27) reporting each selected node to an application to invoke node-specific behavior in the application, the node specific

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application being other than generating a representation of the hierarchy, and the application being other than the graphical user interface used to represent the hierarchy (figure 14B, step 328, calculate position of stick at the point that its label would be visible, which is a node-specific behavior in the application being other than generating a representation of a hierarchy)

enabling a user to trigger the action associated with a displayed node of the hierarchy by invoking the node using a type of action, which is dragging (figure 15, user clicks and drags on container label; col 8, lines 22-27) Theisen does not disclose a second type of action comprising releasing. However, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have known that actions such as clicking and dragging are always accompanied with releasing action to complete a dragging action.

Regarding claims 15 and dependent claims 16-17, applicants argue that Theisen does not disclose or suggest an action other than generating a representation of the hierarchy, and an application being other than the graphical user interface used to represent the hierarchy.

Examiner disagrees. Theisen discloses invoking calculate position of stick at the point that its label would be visible (figure 14B, step 328), which is a node-specific behavior in the application being other than generating a representation of a hierarchy.

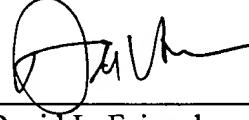
Applicant has amended claim 15 to clarify the wording and to recite that the first type of user-interface action is "performed only outside of the displayed representation of the portion of the hierarchy" and that the second type of action is "only within the displayed representation of the portion of the hierarchy." Claim 15 was discussed during the interview and applicant believes that the examiner and her supervisor found persuasive the applicant's argument that Theisen did not provide for two types of actions of the kinds as recited.

All of the dependent claims are patentable for at least the same reasons.

Applicant asks that all claims be allowed. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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